

```

graph TD
    START([START]) --> 105[POSITION ELECTRODE IN PATIENT'S BODY]
    105 --> 110[SENSE AMPLITUDE OF A SERIES OF BEATS]
    110 --> 115[PROCESS AMPLITUDE DIFFERENTIALS, IF ANY, BETWEEN ADJACENT BEAT PAIRS]
    115 --> 120[OBTAIN THE SIGN OF THE DIFFERENTIAL OF THE ADJACENT BEAT PAIRS]
    115 --> 150[OBTAIN THE MAGNITUDE OF THE DIFFERENTIAL OF THE ADJACENT BEAT PAIRS]
    120 --> 125{IS SIGN CONSISTENT ?}
    125 -- NO --> END([END])
    125 -- YES --> 135[INDICATE PRESENCE OF INTRACARDIAC REPOLARIZATION ALTERNANS]
    135 --> END
    150 --> 155[DEFINE ELECTRICAL STIMULUS/STIMULI]
    155 --> 160{IS SIGN CONSISTENT ?}
    160 -- YES --> 165[DELIVER ELECTRICAL STIMULUS/STIMULI]
    165 --> 110
    160 -- NO --> 110

```

FIG. 1

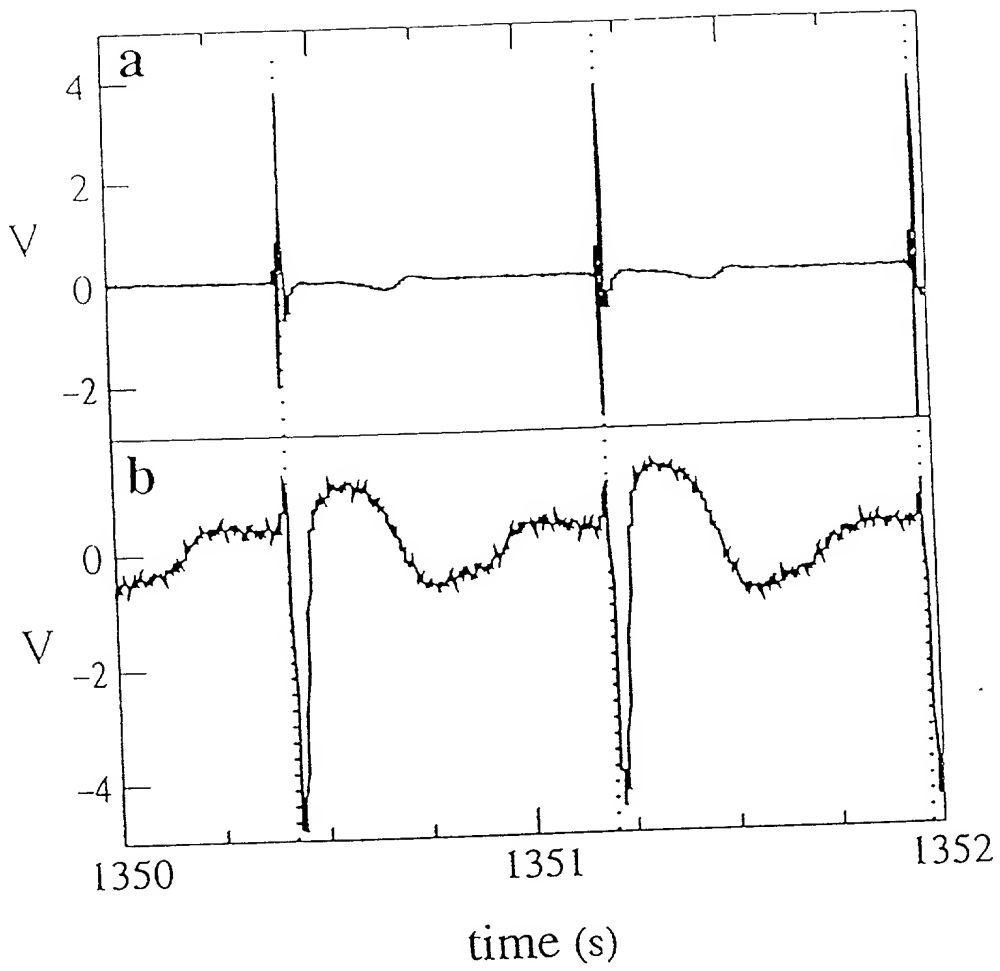


FIG. 2

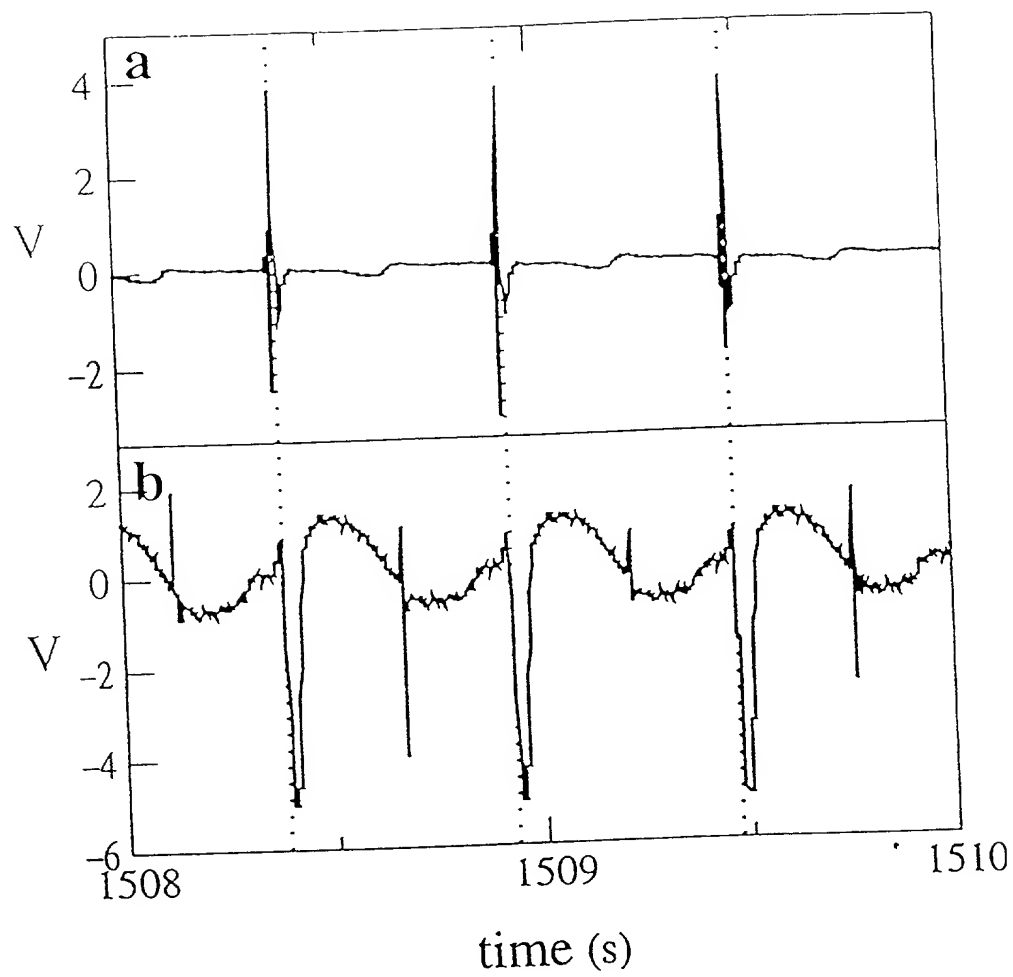


FIG. 3

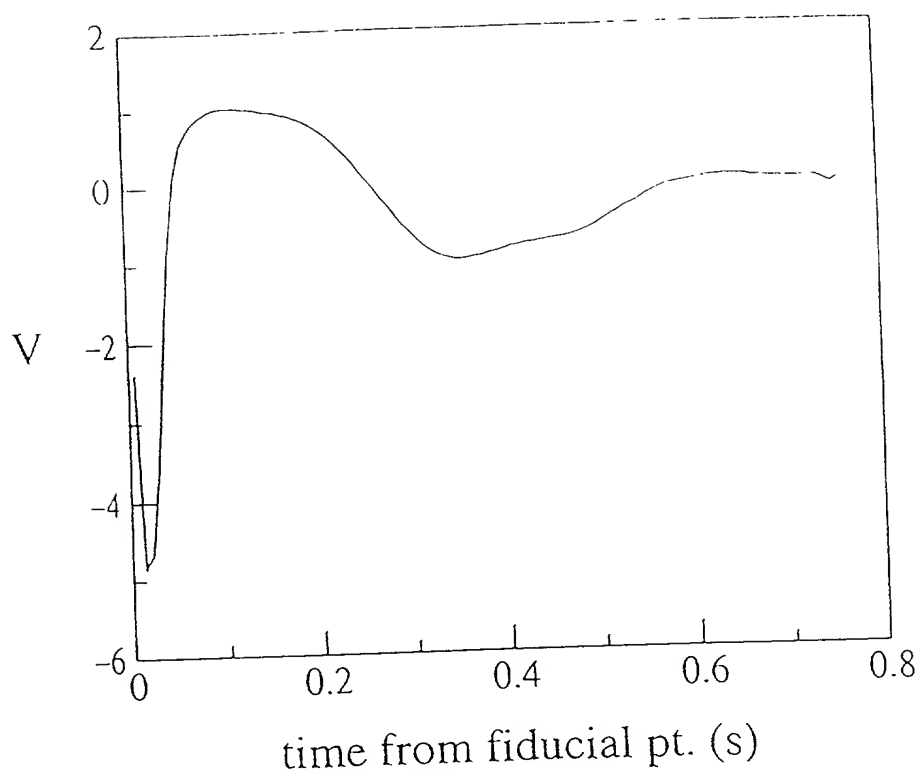


FIG. 4

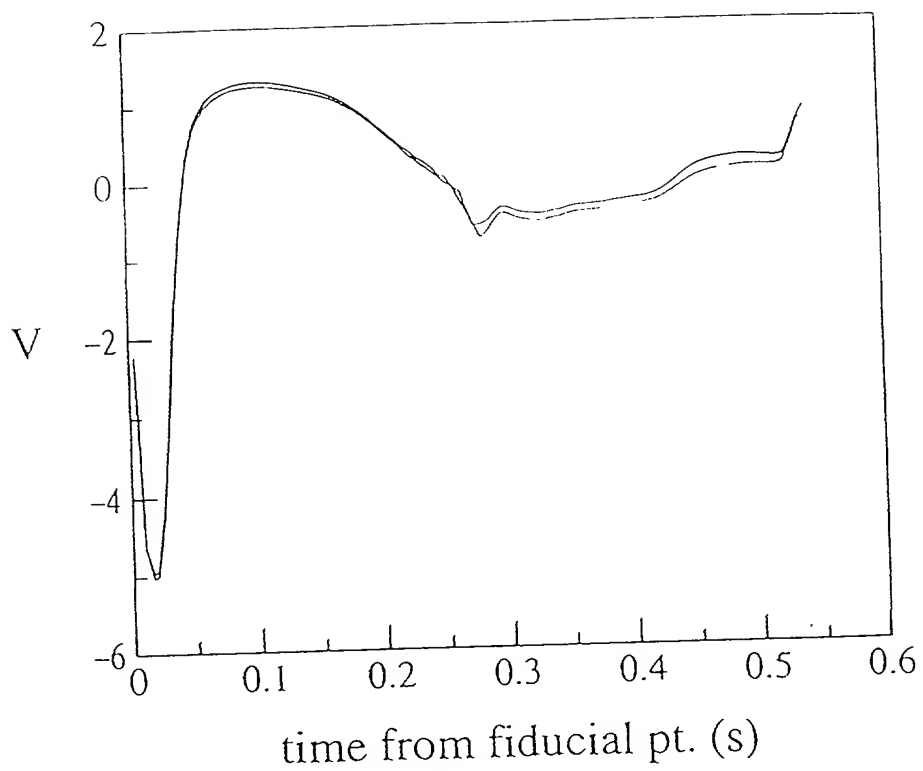


FIG. 5

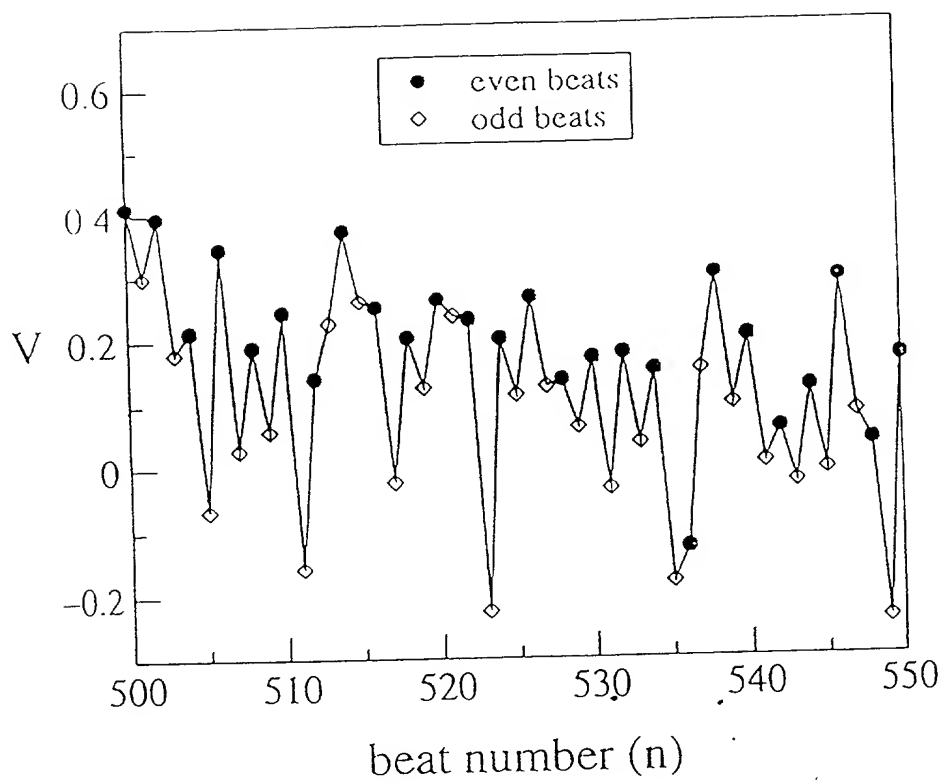


FIG. 6

Patient	Gender	Age (years)	Antiarrhythmic medications	Beta-blockers	Cardiac diagnosis	Electrocardiogram	Study indication	Induced IAT	TWA	Endocardial RPA
1	F	57	-	+	NIDCM	LBBB	syncope	-	-	+
2	F	27	-	+	NIDCM	NSRA	syncope	-	+	+
3	M	64	-	+	ICM, CAD	NSRA	NSVT	+	+	+
4	M	65	-	-	NIDCM	LBBB	syncope	-	-	-
5	M	32	-	-	MVP	RVCD, NSRA	CA	-	-	-
6	M	51	-	+	ICM	AWMI, LAFB	NSVT	+	+	+
7	M	79	-	+	ICM	NSRA	syncope	-	-	-
8	F	66	-	+	CAD	IMMI, NSRA	NSVT	-	-	-
9	F	58	-	-	MR	AWMI	SVT, NSVT	-	-	-
10	M	68	-	+	ICM	IVCD, AWMI	NSVT	+	+	-
11	M	68	-	+	ICM	IVCD	NSVT	-	+	+
12	M	51	-	+	ICM	AWMI, NSRA	NSVT	+	+	+
13	M	82	-	+	-	normal	syncope	-	-	+
14	M	70	-	-	ICM	IPMI, ALRA	NSVT	-	+	-
15	M	76	-	+	ICM	1° AVB, IVCD	NSVT	+	+	+
16	F	81	-	-	CAD, HCM	LVI, ALRA	NSVT, syncope	-	-	-
17	M	61	-	+	ICM	LVI	NSVT	+	+	+
18	M	79	-	+	ICM	1° AVB, LBBB, AWMI	syncope	+	-	-
19	M	75	Amblyopia	-	CAD	RBBB, LAFB	sustained VT	+	-	-
20	M	81	-	-	ICM	LBBB	sustained VT	+	+	-
21	M	35	-	+	NIDCM	normal	CA	-	-	-

1° AVB: 1st degree atrioventricular-nodal block, ALRA: anterolateral repolarization abnormality
 AWMI: anterior wall myocardial infarction, CA: cardiac arrest, CAD: coronary artery disease
 HCM: hypertrophic cardiomyopathy, ICM: ischemic cardiomyopathy, IPMI: inferoposterior myocardial infarction
 IVCD: intraventricular conduction delay, IMVI: inferior wall myocardial infarction, LAFB: left anterior fascicular block
 LBBB: left bundle branch block, LVI: left-ventricular hypertrophy, MR: mitral regurgitation, MVP: mitral valve prolapse
 MVT: monomorphic ventricular tachycardia, NIDCM: non-ischemic dilated cardiomyopathy
 NSRA: non-specific repolarization abnormality, NSVT: non-sustained ventricular tachycardia
 RBBB: right bundle branch block, RPA: repolarization alternans, RVCD: right ventricular conduction delay
 SVT: supraventricular tachycardia, TWA: T-wave alternans, VT: ventricular tachycardia

FIG. 7

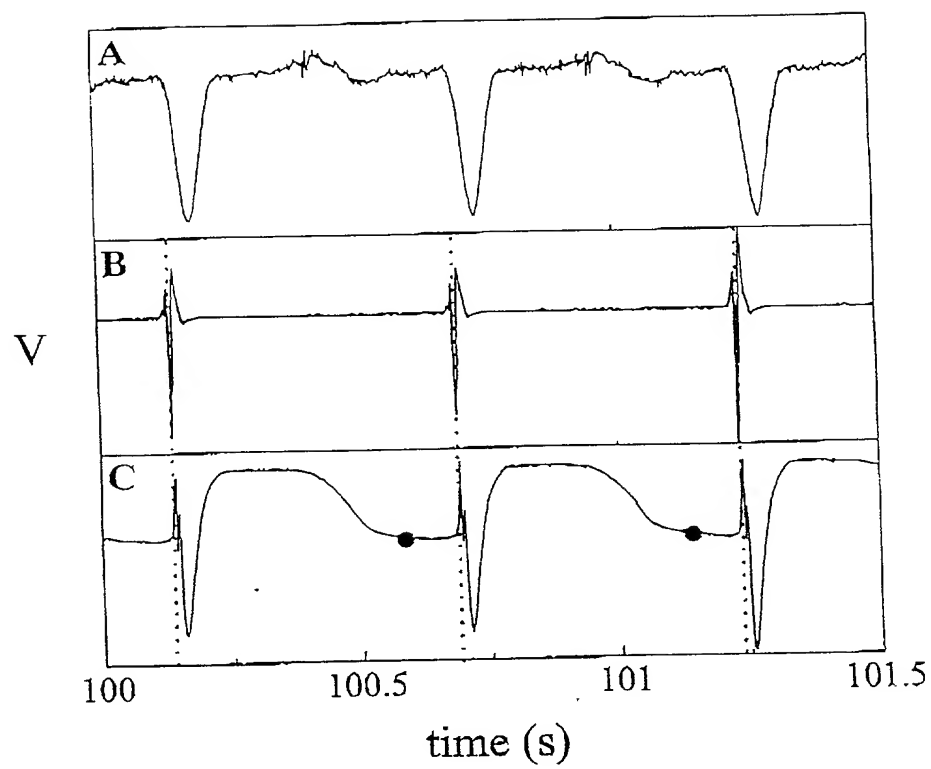


FIG. 8

A	Endocardial RPA		
		+	-
	TWA	+	4
		-	8

FIG. 9A

B		TWA		RPA	
		+	-	+	-
MVT	+	7	2	5	4
	-	4	8	4	8

FIG. 9B

MVT: monomorphic ventricular tachycardia, RPA: repolarization alternans
TWA: T-wave alternans

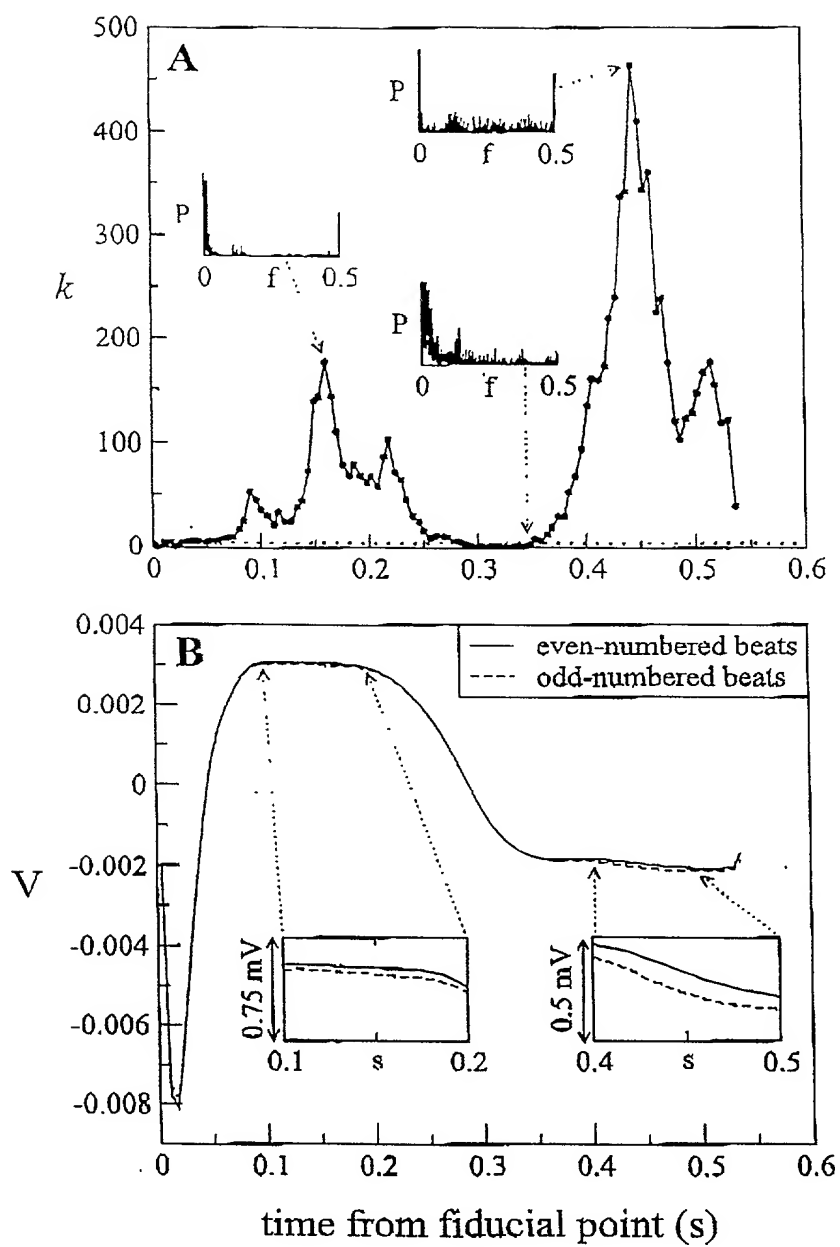


FIG. 10

Figure 1 is a line graph showing the membrane potential V (in mV) versus beat number j . The y-axis ranges from -2.00 to -1.50 mV, and the x-axis ranges from 400 to 500. The graph displays two data series: even-numbered beats (filled circles) and odd-numbered beats (open diamonds). The potential oscillates between approximately -1.65 mV and -1.95 mV. An inset graph shows a zoomed-in view of the potential over a short time interval t with voltage V on the y-axis, highlighting the rapid changes between beats.

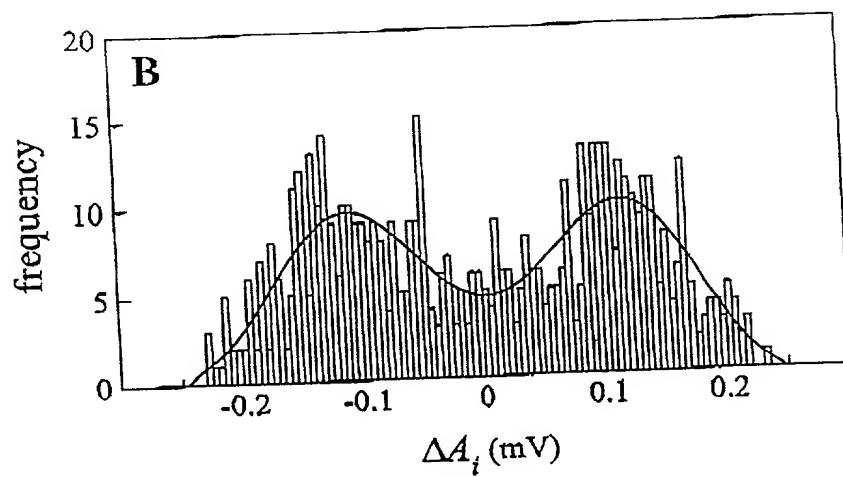


FIG. 11

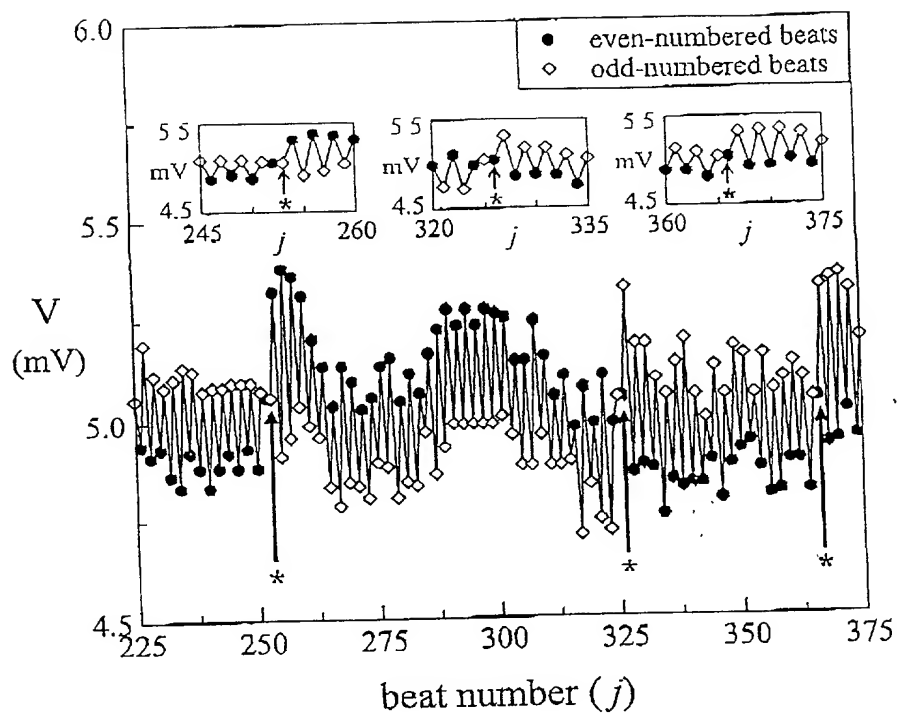


FIG. 12